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| APPLICATION NO.        | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------|-------------|----------------------|---------------------|------------------|
| 10/636,025             | 08/07/2003  | Leif Fredin          | 065823.0110         | 1031             |
| 23640                  | 7590        | 07/25/2005           | EXAMINER            |                  |
| BAKER BOTTS, LLP       |             |                      | PRITCHETT, JOSHUA L |                  |
| 910 LOUISIANA          |             |                      | ART UNIT            |                  |
| HOUSTON, TX 77002-4995 |             |                      | PAPER NUMBER        |                  |

2872

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/636,025

Applicant(s)

FREDIN ET AL.

Examiner

Joshua L. Pritchett

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This action is in response to Request for Continued Examination filed May 5, 2005 and Amendment filed June 2, 2005. Claim 1 has been amended as requested by the applicant.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigehara (US 6,771,358).

Regarding claim 1, Shigehara teaches a light source producing an excitation signal; a single-mode optical fiber coupled to the light source so that a couple excitation signal is introduced into the optical fiber, wherein the coupled excitation signal is a continuous wave signal modulated at variable frequencies and a first detector to receive radiation backscattered by the optical fiber in response to the excitation signal (col. 7 line 59 – col. 8 line 9; Fig. 1). Shigehara lacks reference to a laser as a light source. It is extremely well known in the art to have a laser as a light source for coupling very specific wavelengths into an optical fiber.

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Official Notice is taken. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Shigehara light source be a laser as is known in the art for the purpose of outputting the variable wavelengths with narrow wavebands to allow the filters (41-44; Fig. 1) of Shigehara to more efficiently remove the wavelengths from the fibers (11-14; Fig. 1).

Regarding claim 8, Shigehara teaches the claimed invention except for the duplication of the detector. It would have been obvious to one having ordinary skill in the art at the time the invention was made to duplicate the detector, since it has been held that a mere duplication of working parts of a device involves only routine skill in the art. One would have been motivated to duplicate the detector for the purpose of providing a detector for each of the four wavelengths of Shigehara to more precisely determine the amount of light backscattered at that specific wavelength.

### *Response to Arguments*

Applicant's arguments, see Amendment, filed June 2, 2005, with respect to the rejection(s) of claim(s) 1 and 8 under Sai have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Shigehara. The examiner suggested claim language that would overcome the prior art of record in a previous telephone interview. The applicant made the suggested amendment and the previous prior art of record has been overcome.

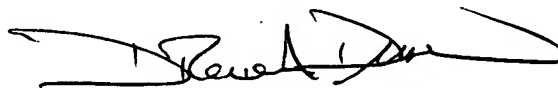
*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L. Pritchett whose telephone number is 571-272-2318. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLP 



**DREW A. DUNN**  
**SUPERVISORY PATENT EXAMINER**